

IN THE CLAIMS:

Kindly amend claims 1, 11 and 13 as follows. A detailed listing of all claims is as follows.

Claim 1 (Currently Amended): A white LED having two light emitting layers, comprising:

a GaAs substrate;

a first light emission device being formed on the GaAs substrate, and composed of III-V family compound semiconductor which emits a light with a wavelength in a range of about 635 – 780 nm;

a second light emission device being formed on the first light emission device, and composed of II-VI family compound semiconductor which emits a light with a wavelength in a range of about 450 – 550 nm; and

electrodes being formed on a region of the GaAs substrate, the first light emission device, and the second light emission device, respectively,

wherein the light emitted from the first light emission device is mixed with the light emitted from the second light emission device by matching lattices of the two semiconductors to generate white and a variety of visible lights.

Claim 2 (Previously Presented): A white LED as claimed in claim 1, further comprising a metal contact layer on each of the first and second light emission devices.

Claim 3 (Original): A white LED as claimed in claim 2, wherein the metal contact layer is of a GaAs group.

Claim 4 (Previously Presented): A white LED as claimed in claim 1, wherein the first light emission device includes a multi-quantum well structure of GaAs/AlGaAs group, or InGaP/AlInGaP group.

Claim 5 (Previously Presented): A white LED as claimed in claim 1, wherein the second light emission device includes a multi-quantum well structure of ZnCdSe/ZnMgSSe group or ZnCdSe/ZnMgBeSe.

Claim 6 (Previously Presented): A white LED as claimed in claim 1, wherein the electrodes include:

- a first electrode under the substrate,
- a second electrode on the first light emission device, and
- a third electrode on the second light emission device.

Claim 7 (Previously Presented): A white LED as claimed in claim 1, wherein the electrodes include:

- a first electrode under the substrate,
- a plurality of second electrodes formed on the first light emission device at fixed intervals, and

a plurality of third electrodes formed on the second light emission device at fixed intervals, wherein a fixed width groove is formed between adjacent second electrodes and the adjacent third electrodes, to isolate the electrodes.

Claim 8 (Previously Presented): A white LED as claimed in claim 7, wherein the groove has a depth so as not to expose light emission areas of the first and second light emission devices.

Claims 9-10 (Canceled).

Claim 11 (Currently Amended): A white LED having two light emitting layers, comprising:

a GaAs substrate;

a first light emission device composed of a multi-quantum well structure of GaAs/AlGaAs or InGaP/AlInGaP on the GaAs substrate having a stack of a first clad layer, a first active layer, and a second clad layer disposed in succession, wherein the first light emission device emits a light with a wavelength in a range of about 635 – 780 nm;

a GaAs first contact layer on the first light emission device;

a second light emission device composed of a multi-quantum well structure of ZnCdSe/ZnMgSSe or ZnCdSe/ZnMgBeSe on the GaAs contact layer having a stack of a third clad layer, a second active layer, and a fourth clad layer disposed in succession, wherein the second light emission device emits a light with a wavelength in a range of about 450 – 550 nm;

a GaAs second contact layer on the second light emission device; and

electrodes under the substrate, and regions of the first and second contact devices, respectively,

wherein the light emitted from the first light emission device is mixed with the light emitted from the second light emission device by matching lattices of the two semiconductors to generate white and a variety of visible lights.

Claim 12 (Original): A white LED as claimed in claim 11, wherein the substrate and the first contact layer are of different conduction types, and the substrate and the second contact layer are of the same conduction type.

Claim 13 (Currently Amended): A white LED having two light emitting layers, comprising:

a GaAs substrate;

a first light emission device composed of a multi-quantum well structure of GaAs/AlGaAs or InGaP/AlInGaP on the GaAs substrate having a stack of a first clad layer, a first active layer, and a second clad layer disposed in succession, wherein the first light emission device emits a light with a wavelength in a range of about 635 – 780 nm;

a GaAs first contact layer on the first light emission device;

a second light emission device composed of a multi-quantum well structure of ZnCdSe/ZnMgSSe or ZnCdSe/ZnMgBeSe on the GaAs contact layer having a stack of a third clad layer, a second active layer, and a fourth clad layer disposed in succession, wherein the second light emission device emits a light with a wavelength in a range of about 450 – 550 nm;

a GaAs second contact layer on the second light emission device;

a first electrode under the substrate;
a plurality of second electrodes on the first contact layer;
a plurality of third electrodes on the second contact layer; and
grooves between the second electrodes and between the third electrodes each having a depth for isolating one another,

wherein the light emitted from the first light emission device is mixed with the light emitted from the second light emission device by matching lattices of the two semiconductors to generate white and a variety of visible lights.

Claim 14 (Original): A white LED as claimed in claim 13, wherein the substrate and the first contact layer are of different conduction types, and the substrate and the second contact layer are of the same conduction type.

Claim 15 (Previously Presented): A white LED as claimed in claim 13, wherein the groove has a depth so as not to expose active layers of the first and second light emission devices.

Claims 16-20 (Withdrawn).